

AMENDMENT

CLAIM OBJECTIONS

Remarks

Applicant respectfully submits a marked up version of the claims in compliance with 37 CFR 1.121(c), with corrections made to Claims 1, 14 and 26 as required by the Examiner.

Examiner requires Applicant to correct informalities in Claims 1, 14 and 26. Specifically, the Examiner stated:

"Claims 1, 14, and 26 are objected to because of the following informalities: the preamble recites "a golf putter comprising;" should be incorporated into the claim language in claims 1, 14 and 26 rather than in a form of an introduction to the claim language. Appropriate correction is required."

Applicant is hereby submitting amended claims 1, 14 and 26, with the preamble incorporated into the claim language.

CLAIM REJECTIONS

Remarks

Applicant respectfully submits the arguments below for the Examiner's consideration.

Examiner Rejects claims 1 and 14 under U.S.C. 102(b) as being anticipated by Caldwell (3,578,332). Specifically, the Examiner stated:

"Claims 1 and 14 are rejected under U.S.C. 102(b) as being anticipated by Caldwell (3,578,332). Caldwell discloses the golf club of the claimed invention (Figures 1-5 and Col. 1, lines 36-53)."

Applicant respectfully submits that Caldwell does not disclose the golf club of the present invention. The golf club disclosed by Caldwell is significantly different. Caldwell claims "a golf putter

having an elongated head with toe and heel portions, a planar striking surface,... " (Claim 1, Col. 2, Lines 36-37) whereas, the putter of the present invention has an elliptical striking surface. Moreover, Caldwell discloses "...the juncture 15 (FIG. 4) of the sole 16 with said striking face 10 radiuses slightly so as to obviate the formation of a sharp cutting edge." (Col. 2, Lines 3-5). In the present invention, the juncture of the sole and the elliptical striking face has a sharp edge. "The sharp edged rearward angle extending rearwardly from the sole forms a doze to brush back the taller grass, increasing the odds of making putts launched from less manicured greens or from the fringe areas surrounding the green." (Specification, Page 11). Finally, Caldwell's putter has a sole which is "... curved from heel 11 to the toe 12.", while the sole of the present invention is a straight line from the heel to the toe. "The preferred embodiment of the present invention ... (limits) ... the width of the sole across the transverse portion of the putter head." (Specification, Page 11)

Examiner Rejects claims 1 and 14 under U.S.C. 102(b) as being anticipated by Bernhardt (4,265,451). Specifically, the Examiner stated:

"Claims 1 and 14 are rejected under U.S.C. 102(b) as being anticipated by Bernhardt (4,265,451). Bernhardt discloses the golf club of the claimed invention (Figure 6)."

Applicant respectfully submits that Bernhardt does not disclose the golf club of the present invention. The golf club disclosed by Bernhardt is significantly different. Bernhardt discloses a putter with "... a sole portion 30 having a compound curvature and extending between rear surface 28 and ball striking surface 29... (Col. 5, Lines 6-8), whereas the present invention has a narrow, flat sole portion. "The head forms a narrow sole to decrease drag allowing a smoother juncture between the earth, the grass and the putter." (Specification, Page 11). The Bernhardt putter sole portion "...upwardly and outwardly diverges from centerline 34 toward inner end 32 and outer end 33.. The second curvature of sole portion 30 is the upward and rearward curvature between the lower edge of ball-striking surface 29 and the lower edge of rear surface 28." (Col. 5, Lines 19-24). As noted above, the sole portion of the present invention is flat from toe to heel.

The ball-striking surface of the Bernhardt putter is "...substantially flat...." (Col. 5, Line 28) whereas the ball striking surface of the present invention is elliptical. "A non-radial striking face is created by using the equivalent of a finite element grid specified to reshape the striking surface at 1/10-inch increments and recalculate the surface contour to allow its user a 1-degree ball strike when the ball is impacted at any point on the putter head striking surface." (Specification, Page 9).

The shaft of the Bernhardt putter is significantly different from that of the present invention in that it "...includes a wedge-shaped portion 40 which extends forward of ball-striking surface 29..." (Col. 6, Lines 19-20). "The present invention includes a shaft that extends rigidly from the putter head at an angle greater than 10 degrees from the vertical." (Specification, Page 2) The shaft of the present invention is a conventional tubular member.

Examiner Rejects claims 1 and 14 under U.S.C. 102(b) as being anticipated by Giordano (6,179,727). Specifically, the Examiner stated:

"Claims 1 and 14 are rejected under U.S.C. 102(b) as being anticipated by Giordano (6,179,727). Giordano discloses the golf club of the claimed invention (Figures 1-3)."

Applicant respectfully submits that Giordano does not disclose the golf club of the present invention. The golf club disclosed by Giordano is significantly different. Giordano discloses a putter with a front surface "...provided for striking a golf ball and compris(ing) a convex surface defined by upper radius 34 and lower radius 36. In this preferred embodiment upper radius 34 is smaller than lower radius 36..." (Col. 2, Lines 63 - 67). The striking surface of the present invention is characterized by a striking face with a non-radial curvature. (Claim 2, Line 3) Furthermore, the Giordano putter is a dual radius putter having a convex shape on the striking surface of the putter and the non-striking surface of the putter.

The Giordano putter has a "...bottom surface 42...defined by bottom radius 46 and has a substantially convex shape. (Col. 3, Lines 33-34). The putter of the present invention has a flat narrow sole (Claim 5, Line 1)

Examiner Rejects claims 1 and 14 under U.S.C. 102(b) as being anticipated by Stevenson, Jr. (5,333,870). Specifically, the Examiner stated:

"Claims 1 and 14 are rejected under U.S.C. 102(b) as being anticipated by Stevenson, Jr. (5,333,870). Stevenson, Jr. discloses the golf club of the claimed invention (Figures 1 and 11 and Col. 9, lines 54-68)."

Applicant respectfully submits that Stevenson, Jr. does not disclose the golf club of the present invention. The golf club disclosed by Stevenson, Jr. is significantly different. Stevenson, Jr. discloses a rounded sole with a possible embodiment of a "...Wider sole... securely fastened to backside 12..." (Col. 8, Lines 27-28). The sole of the present invention is narrow and flat. (Claim 5, Line 1) The rear portion of

the Stevenson, Jr. putter is curved while the doze of the present invention is flat. "The sharp edged rearward angle extending rearwardly from the sole forms a doze to brush back the taller grass, increasing the odds of making putts launched from less manicured greens or from the fringe areas surrounding the green." (Specification, Page 11). The striking surface of the Stevenson, Jr. putter is oriented in a "...substantially vertical plane..." Col. 11, Line 58) and "...flat and slanted rearwardly..." (Col. 11, Lines 64-65). The striking surface of the present invention is elliptically curved. "The new striking surface of the present invention begins with a 1-degree non-radial contour in the optimum-striking center in the middle of the striking surface. A non-radial striking face is created by using the equivalent of a finite element grid specified to reshape the striking surface at 1/10-inch increments and recalculate the surface contour to allow its user a 1-degree ball strike when the ball is impacted at any point on the putter head striking surface." (Specification, Page 9)

CLAIM REJECTIONS - 35 USC § 103

Remarks

Applicant respectfully submits the arguments below and requests that the Applicant be allowed a telephone interview at the Examiner's convenience to address concerns the Examiner may have with respect to the contents of Applicant's reply.

Examiner Rejects claims 2, 4-11, 13, 15, 17-24 and 26-30 under 35 U.S.C. 103(a) as being unpatentable over Caldwell in view of Stevenson, Jr., Rife and Ashcraft. Specifically the Examiner stated:

"The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4-11, 13, 15, 17-24 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell '332 in view of Stevenson, Jr. '870

and Rife (5,618,239) and Ashcraft (6,261, 190). Caldwell '332 discloses a putter head with a narrow sole 16 and a rear section sculpted (Fig.3) with enlargement 13 near the shaft and head attachment (Col. 2, Lines 50-53) facilitates (sic) ball alignment and improves (sic) propulsion force (Col.2, lines 22-27). Caldwell does not disclose alignment means and a striking face with non-radial curvature (convex striking face with grooves). Caldwell appears to show the bottom rear portion curved rearwardly and upwardly similar to the doze portion of the claimed invention. Likewise, Stevenson also discloses a narrow sole and the backside 12 is slanted backward (Fig. 11) to concentrate more mass at the top surface 3 or shaft attachment of the head. Rife teaches that the grooves 302 of a convex striking face (Fig. 8) creates an overspin or rolling action, which provides more control to a golf ball upon impact. Ashcroft teaches an alignment feature 50, which allows a golfer to align the putter with the golf ball (Col. 1, lines 35-38 and Col. 3, lines 49-54). Thus it would have been obvious in view of Stevenson and Rife and Ashcraft to one having ordinary skill in the art to modify the putter of Caldwell with the backside slanted backward as taught by Stevenson, grooves on the striking face as taught by Rife, and alignment feature as taught by Ashcraft in order to provide a putter of Caldwell with mass concentration at the shaft, overspin action for a golf ball, and alignment feature. The above combination features essentially enhance the performance of Caldwell's putter. With respect to the loft angle in claims 8, 20 and 28, it is conventional to provide a striking face with positive loft angle to ensure the golf ball have (sic) a pure rolling motion, which minimizes the golf ball from deviating from its intended path and it would have been obvious to do so here to gain the same benefit."

With respect to claims 2, 4, 17 and 27(alignment means)

The alignment means of Ashcraft bears no similarity whatsoever with the claimed alignment means of the present invention. The alignment means of the present invention provides for a sight line that does not depend on the position of the club and does not depend on the skill of the golfer to hold the club in a desired position to strike the ball and transverse the proper distance with the desired accuracy

The alignment system on Ashcraft's putter fails the minute the putter is put into motion because Ashcraft's putter only has one "correct" striking position. The alignment means of the Ashcraft putter are only effective during the address of the ball and are rendered completely ineffective once the club is put into motion during the putting stroke.

The non-radial club face of the present invention compensates for any position of the club during the address, swing or impact (strike), providing a surface that meets the ball at an angle which results in the desired motion of the ball without the golfer having to possess the level of skill required to maintain the club in the "correct" position.

The alignment means of the present invention further allow the golfer to observe the position of the club relative to the ball at impact because the alignment means of the present invention "frame" the ball. The curve in the Ashcraft putter meets the ball at a tangent point of the curve. This tangent point is very small and makes it almost impossible for the golfer to accurately return the club to that tangent point. Such return requires the golfer to maintain the position of the putter throughout the swing, a very difficult task for any but the most experienced golfer.

The alignment means of the Ashcraft putter are two tiered, one section being on the part of the putter that strikes the ball and the other part being on the part of the putter that is above the striking surface resulting in an alignment means that aligns along the vertical axis of the shaft. The alignment means of the present invention are on the top of the putter and are in conformity with the position of the club head regardless of the position of the shaft.

With respect to claim 5 (Sole)

The narrow sole of the present invention has a specific utilitarian purpose. That purpose is to expand the effective use of the putter in the taller grass or fringe area surrounding the green. In conjunction with the slanted doze, the narrow sole of the putter of the present invention provides a smoother juncture between the earth, the grass and the putter head itself, brushing back the taller grass and allowing for a smooth stroke so the putter will not hang up on a back stroke.

None of the cited inventions disclose or claim this feature. Stevenson, Jr. has a protrusion "8A" (Figure 1 and Figure 4) which will "hang up" on the back stroke.

With Respect to Claims 6, 7, 15, 18, and 19: (Doze)

The doze of the present invention provides a surface which increases the utilitarian use of the putter, aiding the putter in sweeping back the tall grass, the fringe of the putting green. None of the putters disclose or claim this feature. The upwardly and rearwardly slanted portions of the Caldwell and Stevenson putters bear no resemblance to the narrow sole and doze portion of the present invention. Neither Stevenson nor Caldwell disclose or claim any utilitarian purpose.

With Respect to Claims 2, 8, 9, 10, 13, 15, 17, 28, 29 and 30: (Convex Striking Face)

The grooves on the striking face of Rife bear no resemblance or similarity to the non-radial curvature on the face of the present invention. Rife does not disclose or claim the non-radial curvature of the striking face of the present invention. While Rife indicates that that his putting surface " makes "...a single putter adaptable to any putting surface" the grooves address the lofted trajectory of the ball.

The face of the present invention provides for the bulge of the putter whereas the face of the Rife putter is flat. The grooves of the Rife putter grab the ball to "provide for an increased gripping action on the ball" (Col 1, Lines 52-53) with a subsequent improved lift. The present invention provides for an improved lift by means of the non-radial contours of the individual strike points on the putter face. The means for achieving the improved loft in the present invention bear no similarity whatsoever to the means employed in the Rife putter for achieving an improved loft. The Rife grooves seek to eliminate the loft factor in the putter face whereas the non-radial striking surface of the putter face of the present invention gives a uniform one degree lofted strike.

The non-radial club face of the present invention compensates for any position of the club during the address, swing or impact (strike), providing a surface that meets the ball at an angle which results in the desired motion of the ball without the golfer having to possess the level of skill required to maintain the club in the "correct" position.

The efficacy of the Rife putter is highly dependent on the skill of the golfer because the putter must be held in the "correct" position when the ball is struck. If the Rife putter is not held in the proper position, the grooves of the putter face will result in the ball being driven into the ground or lifted too high off the putting surface, resulting in a backspin. The non-radial surface of the present invention exhibits both bulge and roll resulting in the imparting of a uniform lift to the ball regardless of putter head position.

With Respect to Claims 2 and 11: (Cut out portion or recess)

Caldwell neither discloses nor claims mass concentration behind the center of inertia as in the present invention. Therefore it would not have been obvious to cut out a portion of the Caldwell putter to concentrate mass at the shaft because this is not applicable to the present invention. The present invention has mass concentrated not

at the shaft, but at the point of inertia. The cut out portion of the present invention is also used to aid in sight alignment, forming a concentric curve along the curve of the alignment means on the top of the putter.

With Respect to CLAIMS 9, 21 and 29 (front striking face):

Examiner indicates that "with respect to claims 9, 21, and 29, Official Notice is taken that it is conventional to provides (sic) such non-radial surface to control backspin of the ball upon impact and it would have been obvious and desirable to incorporate such surface feature to prior art above to control the backspin of the ball." Applicant respectfully submits that none of the cited inventions incorporate a non-radial striking surface. Applicant respectfully submits that it is known in the art to provide a radial surface to control backspin of the ball upon impact. The present invention solves the problem of backspin by "... imparting a one degree loft and a controllable overspin to the ball by providing a novel striking surface which impacts the ball at a one degree angle off the perpendicular throughout an expanded strike zone or "sweet spot". The striking surface of the preferred embodiment is defined by a closed plane curvature generated by a point moving in such a way that the sums of its distances from two fixed points is a constant. The new striking surface of the present invention begins with a 1-degree non-radial contour in the optimum-striking center in the middle of the striking surface. A non-radial striking face is created by using the equivalent of a finite element grid specified to reshape the striking surface at 1/10-inch increments and recalculate the surface contour to allow its user a 1-degree ball strike when the ball is impacted at any point on the putter head striking surface. This provides a tangible "forgiveness" for those less skilled in the art of putting. Thus, if the golfer strikes the ball with the shaft angled forward or angled back from the striking point, or with the putter head at a varying distance from the ground, the ball will attain the desired overspin and loft. The present invention compensates for unfavorable strokes, correcting for under and over striking through the use of a novel surface curvature identical to the angle of lift at differing heights of the putter from the surface of the ground when the putter hits the ball. No other cited art incorporates this feature." (Specification, Pages 8-9)

RESPONSE TO ARGUMENTS

Remarks

Applicant respectfully asks the Examiner to consider the arguments made with respect to claims 1-30 in the Applicant's response to the previous Office Action.

Examiner deemed Applicant's arguments moot in view of the new grounds of rejection.

Specifically, the Examiner stated:

"Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection."

Applicant respectfully requests the Examiner to consider the arguments previously made and resubmitted herein. Applicant further requests a telephone interview with the Examiner to clarify any concerns the Examiner may have.

Conclusion

Applicant respectfully submits that it would not have been obvious to modify the putter of Caldwell with the backside slanted backward as taught by Stevenson, grooves on the striking face as taught by Rife, and alignment feature as taught by Ashcraft in order to provide a putter of Caldwell with mass concentration at the shaft, overspin action for a golf ball, and alignment feature.

Applicant respectfully traverses the Examiner's rejections.

Claims 1, 2, 4-11, 13 - 15, 17 - 24 and 26 - 30 disclose a novel, non-obvious invention. Applicant respectfully submits that the cited art neither teaches, discloses, hints or suggests in any manner whatsoever the golf club as defined in the cited art.

In particular, the present invention discloses and claims a putter with an elliptical striking surface, unlike the planar striking surface of the Caldwell '332 putter, unlike the grooved surface of the Rife '239 putter, unlike the substantially flat ball-striking surface of the Bernhardt putter, and unlike the radii of the Giordano '797 putter. The putter of the present invention has a narrow, flat sole portion with a sharp edge at the juncture of the doze and the sole, unlike the radiused juncture of Caldwell, the curved sole portion of Bernhardt '451, the wide sole of Giordano '797 or the rounded sole of Stevenson, Jr. '870. The shaft of the present invention is a conventional tubular member, unlike Bernhardt '451 putter with a wedge shaped portion. The alignment feature of the present invention which frames the ball with a concentric curve is unlike the two-tiered alignment means of Ashcraft which provides only a tangent point for alignment to the ball.

The Applicant submits that the prior art made of record by the Examiner in this Office Action should not be considered pertinent to the present invention for the reasons cited above.

As such, Applicant respectfully requests the Examiner to withdraw the rejection.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment.

In light of the above, Applicant respectfully submits that all the remaining claims are allowable, and Applicant respectfully requests that the Examiner reconsider the case and pass the case to issue. Should the

Examiner have any questions or wish to discuss any aspect of the application, a telephone call to the undersigned would be welcome.

Respectfully submitted,

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